

## PROGRESS OF THE PASSING CENTURY.

A Ponderous Automobile of 1834 Has Been Succeeded by the Light

Running and Marvelous Vehicle of 1900. BY MALCOLM J. RICHARDS, PH.D.

In spite of all failures and in spite of numerous mishaps, many minds have been engaged, theoretically or practically, in attempting to solve the problem of artificial flight. Long before the dawn of the present century men were at work upon flying machines that refused to fly, and the same question is still the most interesting and most important of the scientific problems that the nineteenth century will leave as a legacy to the twentieth.

During the past hundred years considerable progress has been made toward the final solution of the great puzzle. There has been an advance along the lines of dirigible balloons, or air ships, but a flying machine that is in any way suited to the requirements of travel or travel

money should have been expended for nothing, but it will undoubtedly be jeft to the next century to discover the true solution of the problem of successful aerial navigation.

In spite of all this, however, there is much in the science of aeronauties that is deserving of the consideration in such a series of studies as this. Although the great success has not been achieved, hallooning, as we know it, is still distinctly a science of the nine-teenth century. Up to the close of the eighteenth century the progress along these lines had been scarcely worthy of notice, whereas the feats that have been accomplished during the past hundred years have been distinctly worthy of notice.

FAMOUS BALLOONISTS.

Among the balloonists who are most deserving of attention and praise are deserving a balloon which was propolition in the history of aeronauties by constructing a balloon which was propolited by a steam engine. This was the first air ship that could be navigated in a desired direction.

The next great achievement along these lines was made by Gaston Tissandier, who exhibited a bailoon that could be run by means of an electric storage battery, at the Paris Exposition of 1881. Later, assisted by his brother, be built another model, over 30 feet long and 30 feet in diameter, which was fitted with dynamos and a proposition of this problems that have been overcome. Some-

mes it has been at the cost of human life, and always at a great outlay of time and money, but now, at the close of the century, it looks as if the world was to reap the benefit of all this re-

With the Gustave Zede in France and the Holland and Argonaut in this country, there seems to be little reason to believe that the successful submarine boat has not been found. The great American inventor, Fulton, falled, just as Symonds and Bushneil had failed before him, but to their failures are due a portion of the credit of the present success of Holland or of Lake.

ROAD TRANSPORTATION.

If there is any department of human endeavor in which unprecedented progress has been made during the past century, it is in that of road transportation. In the eighteenth century the vehicles were still far from what one might have anticipated, and journeys were made as often on horseback as by any other way.

To-day the crude vehicles have disappeared. In the early part of the present century they gave place to conveyances that were as comfortable as they were safe and ornamental, but now even these are disappearing to make way for a new vehicle that would have astonished our forefathers beyond the power of expression. This vehicle, of course, is the automobile.

Of course, as is well known, the steam carriage antedates the locomotive, and Isaac Newton suggested a rude form with the Gustave Zede in France and

carriage antedates the locomotive, and Isaac Newton suggested a rude form of the machine as early as 1650. From that time until the present day inventors have been at work trying to discover some suitable conveyance of this kind.

one of the first automobiles, however, was made in the early part of the present century, and it is thus described by "The Mechanics' Magazine" for January, 18M: "The carriage is built to carry fifty passengers. The wheels are about six inches broad in the tire and eight feet in diameter. The crank shaft worked by the cylinders is connected by endless chains with the axles of the hind wheels of the carriage, and each wheel has a separate axle.

"The spokes of the wheels are so constructed as to operate like springs to the whole machine—that is, to give and take according to the inequalities of the road.

an hour.

Not only is the automobile one of the most remarkable inventions of this century, but it has been of great service to the people of the United States in that it has given a strong impetus

FIRE ENGINE.

SEARCHLIGHT FOR

New York's New Apparatus For En-

abling the Firemen to See Through Flames.

The new searchlight fire engine, which was built on the suggestions furnished by Fire Chief Croker of New York, arrived there a short time ago from Elmira. It was received at the department repair shop in West Third street by Chief of Construction Ryan, who immediately started to get the engine ready for service. It was given a test and was found to work successfully.

WHERE FUGITIVES

Few Spots Where Criminals May Conceal Themselves From the Man With the Warrant.

It was Dick Swiveller who checked off the streets of London and then decided that there was practically no thoroughfare that he could traverse without fear of meeting a creditor, and the fugitive criminals of to-day are in much the same position. They may seat themselves before a map and study the countries of the earth until mountains, rivers and cities mingle and become one before their weary eyes, but they will be unable to select a single spot in the whole civilized world in which they would be safe from the pursuit of the dreaded man with a warrant.

pursuit of the dreaded man with a warrant.

To-day extradition constitutes so much a part of the jurisprudence of all countries that it is difficult for one to remember that such a condition of affairs is something that is very new, but the public records show that it has only been within the past few years that the world has had no city of refuge to which the criminal might hasten in the hour of his escape.

A few years ago there were many such spots, scattered from one end of the earth to the other, and in those days the fugitive had but to select his place of abode. If he arrived at the chosen habitation, justice was unable to reach him.

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At that time safe harbors were of-fered by Spain, Turkey, Algiers, Ja-pan, Holland, Chill, Ecuador, the Phil-ippines, Cuba and all of Central Amer-ica with the exception of British Hon-duras, to all kinds of criminals from the United States, from murderers down, while the places to which such offend-ers as embezziers might flee was much larger.

take according to the inequalities of the road.

"The boiler consists of a series of double tubes, one within the other, placed in a vertical position around a circular fireplace, and communicating with it; the heated air passes through these tubes, which are everywhere surrounded by water. The tubes are in the form of siphons, to counteract the effect of unequal expansion. The draught is produced by a fanner worked by the engine, and the furnace is made to consume its own smoke."

Crude as such a machine would be to-day, it was a mechanical marvel three-quarters of a century ago, for it was not until 1862 or 1863 that even these steam road vehicles came into practical use. Constant efforts were made to improve them, however, and by 1803 it began to look as if the art of automobile building would finally be mastered.

WENT TO CANADA.

Almost everyone can remember the time when every runaway bank cashier found refuge in Canada, but gradually the didney places communed to marrow down. The United States (Gövernment lost no opportunity to persuade other Powers that nothing could be more advantageous than an extradition treaty, and it has now accomplished its purpose. Several years ago canada passed the law that has made the Dominion an unheaithy resort for such tourists, and still later, Japan adopted a treaty covering what are called the "crimes against property."

Eventually things simmered down until there was nothing left but Central merica, and at last only Spanish Honduras was left. The treaty clause that was adopted in 1895 robbed the fugitive of his last piace of refuge, so that to-day those who desire to escape the strong arm of justice will have to take WENT TO CANADA.

THIS DESOLATE ISLAND OFF IN THE FAR PACIFIC, IS NOW THE ONLY SPOT WHERE FUGITIVES

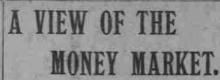
For instance, in Germany a man

For instance, in Germany a man might be seriously punished for having offended the dignity of the Emperor, but if he succeeded in reaching these shores the fact that he had been accused of lese majeste would not be sufficient to persuade the officials of this country to give him up.

In the United States the work of extradition is done through the solicitor of the State Department, and the expense is borne by the countries of the State demanding the fugitive. The United States Government bears the expense only in the case of violators of the United States laws, such as counterfeiters and mail robbers. The average cost of bringing a fugitive back to this country is \$500, and in many cases the crime committed is not sufficiently serious to warrant such an outlay. In important instances, however, much greater sums will be spent, for the French Government spent more than 200,000 francs in obtaining the extradition of Carpenter and other employees of the Railway of Northern France.

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France.
Of late some governments have been Of late some governments have been trying to make Nihilism, Anarchism and the like extraditable, but nothing has been accomplished along this line owing to the fact that it is very hard to discriminate between these and other political offenders. King Humbert of Italy and the Czar of Russia are particularly anxious to see this provision made. They desire to make anarcy, like piracy, a common crime, but the United States will not heed the suggestion. Like most countries with free institutions, it has a serious objection to turning over political prisoners, and in cases where other and extraditable offenses are charged, they have even refused to surrender the fugitive on the extraditable offense unless there first should be an understanding that



people are little more than a race of degenerates.

To banish a fugitive to live among such people would be worse than to sentence him to prison, and existence on any of the other islands where he would be likely to be sheltered would be just as desirable.

NO REFUGE.

As the result, therefore, it may be said with truth that there is no place in the civilized world where the escaped law breaker can hide his head. To-day his government could follow him to any spot where he might go, for even those places where there is no definite treaty are always willing to give up the criminal who has taken refuge in that land. Among all civilized powers the principle of extradition is found and demands for the surrender of a fugitive by one government to another are usually complied with on the ground of international comity.

Of course it must be remembered that there are certain offenses in the monarchical states of Europe that could not be regarded as crimes in this country, and in no possible way can the present extradition treaty be so twisted as to permit of the surrender of foreign fugitives who have taken refuge in the United States because of such offenses.

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For instance, in Germany a man might be seriously nunished for hay. will ensue. The great danger is that as one spark may put a city in flames, so a war comparatively insignificant in itself may involve several of the first-class powers. The keenest statesmen cannot foresee the results.

"The money question here has disturbed public sentiment for thirty or forty days. The great demand upon the city banks for loans has come from all parts of the country, as well as from large dealers who are making applications for great sums of money for business purposes. That the country at large is in a very prosperous condition commercially is indicated by the denand upon New York banks from Chicago, St. Louis, Minneapolis, St. Paul, and in fact from almost all the big cities of the United States.

"That business men are preparing for a greatly increased volume of business in the immediate future is shown by the fact that they are willing to pay full rates and a premium for money in order to be in readiness for any tax which new enterprises may put upon their finnicial resources. There is little chance of any relaxation in the price of money in the near future, as it is now loaning at full rates and a preplum of from one to one and a half percent, for thirty days, three or six months. This is the strongest kind of an indication of the way in which business men regard money prospects.

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The offer of the Government to anticipate interest on bonds will help to ease the money situation temporarily, but high prices of money are legitimately due in consequence of vastly increased demands for industrial purposes. Our cotton and wheat have a great market, and at high prices will bring vast sums of money from abroad. For we are spreading out and developing markets all over the world, many of which are greater than we can supply at present. Of course, all of this is a great stimulus to money. On the other hand, the very high price of iron has retarded the entering into contracts for the building of steam roads, trolies lines, bridges, and the great buildings which are to-day constructed so largely of iron and steel. This has had the effect of restricting to a limited extent the employment of labor.

"Apart from this question of war and its many complications and uncertainties, the business prospects of the United States are infinitely brighter than ever before in the history of the country, as any one with a keen eye and good digestion can see.

"Industrials have got to take a back seat, that is, most of them. There have been forced upon an ill-advised public great amounts of stock of over-capitalized concerns of this character. Of course, I have no reference to first-class properties. There was a time during the recent advance in prices all along the line when many industrials of questionable value were advanced in price artificially in sympathy with the general market. The banks were prevailed upon to loan money on some of these securities, and I was afraid that this

upon to loan money on some of these securities, and I was afraid that this indiscretion might lead to a panie. But that danger is happily passed. A high rate is now demanded for money advanced on the majority of industrials, and can then it is missized that they and even then it is insisted that they be put in at low prices. The rejection of these stocks by the banks of late has the integrity of our financial institu-

"Naturally, high rates for mo cause the holders of gilt-edged securi-ties that pay small dividends to sell out and loan their money at higher rates. The rates on mortgages will no doubt be advanced, but this will not doubt be advanced, but this will not hurt real estate, as the higher salaries paid to working people will enable them in turn to pay higher rent. The people in this country should remember one thing; that is, they are not living upon themselves, but upon the world at large, which they have made their mar-ket, through industry and moral in-territy. tegrity.

"Well, sir, I have no objection to a sorrel. In fact, I am not particular about the Boers we should, as I say, unquestionably support England, not only because she stood beside us during our recent war, but because England and America combined would be more powerful, morally, intellectually and financially, than all the rest of the world. Without sfring a finger we can, by our attitude, compel all other nations to keep their hands off. This will have the effect of not only shortening the war with the Boers, but preventing the disorganization of business and finance throughout the whole civilized world."

Approved, RUSSELL SAGE.

"Well, sir, I have no objection to a sorrel in fact, I am not particular about the color, sir. A broad back, though, remember; that is the main point—and the disposition."

Gen. Corbin again visited the Quartermaster General. "Ludington," he said, "the Secretary says he likes a gray, and he likes a berry roan—in fact, any — color, just so the horse is gentle and he won't find off."

"Sure, sure!" said the Quartermaster General. "I will find him right away."

Hut Gen. Ludington was too sanguine, for the horse has not yet been purchased.

## SECRETARY ROOT RIDES HORSEBACK.

Though He Has Not by Any Means Found the Animal He Wanted.

When Secretary Root was at Lake Champlain with the President, he was called upon to review the Twenty-sixth Voiunteer Regiment, stationed at Plattsburg Barracks, and he greatly admired the sight of the field officers dashing about the parade grounds upon their curveting steeds. He was offered a mount upon one of these metilesome animals, but coyly refused and stuck to terra firma.

But the fine picture remained in his mind, and after his return, while sitting in his office, one fine afternoon, he summoned to him Adjt.-Gen, Corhin. "General," he remarked, "I have been a busy man for a number of years back."

back."
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Gen. Corbin bowed his head in assent.

"And, General, for my business I have neglected many pleasures—pleasures and pastimes, sir—that I once enjoyed."

"Yes, Mr. Secretary."

"One of which, General, I am sorry to state, is the noble and king-like sport of equestrianism. Ah, horseback riding—a firm seat and a steady hand, a gallop in the bracing air over a smooth road! Could anything be more enjoyable?"

"Nothing, Mr. Secretary. Nothing."

"Well, General, to come to the point, I find that now, in the course of my duties, I shall need a suitable mount occasionally, and you know there is nothing like knowing the horse one has under one. I desire to make use of your superior judgment in these matters."

"Certainly, Mr. Secretary."

"As I said, I have neglected the exercise, and, of course—ah!—well, I would like an animal with a mild temper, sweet dispositioned, you know, and a broad back—the sort that is hard to fail off of."

"I understand, Mr. Secretary. I will ask Gen. Ludington, who has had considerable more experience than either

ask Gen. Ludington, who has had con-siderable more experience than either of us, to aid me in making the selec-

of us, to aid me in making the selection."

"And I say, General," called the Secretary, "this need not be made public, you know—not just now, at any rate."

"Yes, Mr. Secretary."

Gen. Corbin hurried up stairs to the office of the Quartermaster General.

"Ludington!" he gasped, short of breath, "the Secretary of War wants us to help him buy a horse—a riding horse, he wants a fine, good looking horse, with a broad back, so he can't fail off, and gentle as a dog."

"Sure! Sure!" answered Gen. Ludington. "I can get it for him. Sure! What color does he want?"

"Wait a minute and I'll ask him."

Gen. Corbin retraced his steps and found the Secretary waiting for him.

"Mr. Secretary, Gen. Ludington wants to know what color horse you want."

"Ah, yes, let me see. What color? I had never thought of that. I always rather fancied a gray horse, you know; perhaps it was from a picture I once saw. Yes, I believe it was. You recall the magnificent gray horse Napoleon strides in the canvas, "The Eve of Waterloo?"

"A splendid animal, Mr. Secretary."

"And then there was Alexander's Bucephalus—a magnificent black, if I remember. Black is a beautiful color for a horse."

horse."
"But, Mr. Secretary, Bucephalus was



SSELL SAGE, CALLED THE UNCLE" OF WALL STREET.

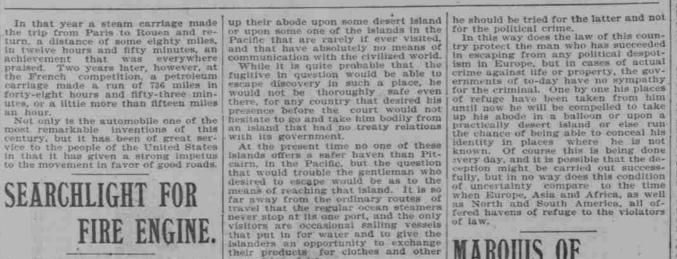
well, ah!—you might say not exactly well broken."

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## an island that had no treaty relations with its government. At the present time no one of these islands offers a safer haven than Pitcairn, in the Pacific, but the question that would trouble the gentleman who desired to escape would be as to the means of reaching that island. It is so far away from the ordinary routes of travel that the regular ocean steamers never stop at its one port, and the only visitors are occasional salling vessels that put in for water and to give the islanders an opportunity to exchange their products for clothes and other necessities of life. It is doubtful, however, if any fugitive who had been used to the refinements of civilized life would be willing to take up his abode on the island, even for the sake of his liberty. To those who are unacquainted with the conditions that now exist on the island the very name of Pitcairn is suggestive of all kinds of romantic associations. Even the dull oid school geographies used to pause for a moment in their painful round of rivers, boundaries and "principal exports," to linger pleasantly over the romance of the mutiny on the British ship Bounty, in 1789, and the landing of the leader, Fletcher Christian, with eight other Englishmen, six Polynesian men and tweive Polynesian women, on lonely Pitrairn Island, where they founded a colony and agreed to live without law. MARQUIS OF LORNE IN TRADE.

He is in the Wall Paper Trust, While His Wife Makes Statues.







NEW YORK'S NEW FIRE ENGINE IS FITTED OUT WITH A SEARCH-